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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,662	05/14/2001	Kazuyuki Shigeta	35.C15364	6820

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT PAPER NUMBER

2674

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/853,662

Applicant(s)

KAZUYUKI

Examiner

Abbas I Abdulsalam

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 7.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

1. A certified copy of a foreign document has been received.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom et al. (USPN 6219015) in view of Yushiya et al. (USPN 6456748).

Regarding claims 1, 4-6, 21 and 24-26, Bloom teaches a color display system including the use of modulators which helps generate images that can be viewed directly or projected onto a viewing screen. Bloom also teaches a modulator (30) that can operate to modulate incident light and also teaches diffraction of red, green and blue spectral illumination from a white light (169) See col. 3, lines 28-32, col. 9, lines 10-41 and Fig (8-9). However, Bloom does not disclose time sequentially switching the generated light beams and illuminating the space modulation means with the light beam. Bloom also does not disclose a white light illumination period per each interval between illumination periods for light beam having different colors, Yushiya on the other hand teaches image reading operation in which the Red, Green and Blue LEDs are turned on their respective turn on periods in order to obtain the desired output level. See col. 12, lines 39-44 and see Fig (20-21) Moreover, as shown in Fig 20, the turn on period for each LED chip is regulated according to the light intensity so as to obtain a constant output level from a sensor when the standard white board is illuminated. See col. 12, lines 13-23.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Bloom's multicolor optical image-generation system to include Yushiya's image reading operation and light intensity control with respect to the periods of different LEDs. One would have been motivated in view of the suggestion in Yushiya that the image reading operation and light intensity control equivalently provide the desired time sequential switching of the light beams and furnishing of white light illumination period with respect to different colors. The use of image reading operation and light intensity control system helps function image reading device taught by Yushiya.

Regarding claims 2-3, 22-23 Yushiya teaches LED turn on time in the color image reading. See Fig 21.

Regarding claims 7 and 27, Bloom teaches a visual display system by exploiting the white light to isolate the three primary color components of each pixel in a color display system. See Fig 21

Regarding claim 8, Yushiya teaches a modulator in its non-diffracting mode including a fluorescent light mounting structure. See Fig 8.

Regarding claims 10 and 19-20 the period of LEDs with respect to light intensity control. See Fig 20.

Regarding claims 9 and 11-14, Bloom teaches the use of a modulator (30) including liquid crystal modulators, DMD-type devices and other types of modulators. See Fig (8-9), col. 2, lines 17-22, col. 3, lines 10-19.

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Regarding claims 15-18, Yushiya teaches the use of light source control device with respect to different light emission wavelengths and a control means for reading color images. See col. 4, lines 22-33.

Regarding claims 28-31, Yushiya teaches a computer (130) including an interface (135) for exchanging various data, and uses the computer for matching the reading mode in conjunction with auxiliary storage as well as a light source control program stored in the ROM (137). See Fig 7 and see col. 5, lines 17-40.

### **Conclusion**

3. The prior art made of record and nor relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 6,504,566 to Yamada et al.

U.S. Pat. No. 6,461,008 to Pederson

U.S. Pat. No. 6,449,023 to Swanson et al.

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314**


Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**